

## ABSTRACT OF THE INVENTION

A network traffic accelerator (NTA) in a TCP/IP communication network comprises a hardware implemented internal network layer, transport layer and data link layer, and is configured to process protocol-supported or protocol-unsupported packets. Both protocol-supported and protocol-unsupported packets may originate from internal or external layers. The NTA includes means to merge such internally and externally originated packages into an internal receive or an internal transmit path, means to split transmit packets between two paths through two data link layers, and means to direct protocol-unsupported packets for external processing.